

## CLAIMS

What is claimed is:

1. A method for transmitting packet headers in a network adapter across a network comprising:
  - storing in a host memory protocol headers and application data into packet buffers;
  - storing in a cache on the network adapter a MAC header; and
  - transmitting the stored packet buffers and stored MAC header across a network.
2. The method as recited in claim 1 further comprising:
  - storing in the host memory a tag indicating a location of the MAC header in the cache;
  - retrieving the tag; and
  - accessing the stored MAC header at the location indicated by the tag when transmitting the MAC header across the network.
3. The method as recited in claim 1 further comprising:
  - storing the protocol headers and application data in a host memory on a personal computer; and
  - passing the stored protocol headers and application data to the network adapter using a direct memory access controller that retrieves data and headers from the host memory and writes the retrieved data in the network adapter.
4. The method as recited in claim 3 further comprising:
  - determining if the MAC header is different from to a MAC header previously transmitted; and
  - storing the MAC header in the host memory if the MAC header is different from the MAC header previously transmitted.
5. The method as recited in claim 4 further comprising, passing the MAC header in host memory using the direct memory access controller and writing the retrieved MAC header in the network adapter.
6. The method as recited in claim 1 further comprising receiving the protocol headers, application data and MAC header from an operating system.

7. The method as recited in claim 3 further comprising:

storing the MAC header into cache on the network adapter using a processor writing the MAC header over a personal computer bus into cache located on the network adapter card; and

passing the protocol headers and application data using a direct memory access controller located on the personal computer bus.

Variable	Mean	Standard deviation	Minimum	Maximum
Age	34.5	10.2	22	55
Gender	0.5	0.5	0	1
Marital status	0.6	0.5	0	1
Education	12.5	1.5	10	15
Income	1500	500	1000	2500
Health status	0.8	0.2	0	1
Employment status	0.7	0.3	0	1
Home ownership	0.9	0.1	0	1
Vehicle ownership	0.6	0.5	0	1
Life satisfaction	4.5	1.0	1	7
Life expectancy	75	5	60	90
Healthcare expenditure	1000	200	500	2000
Life expectancy at birth	75	5	60	90
Life expectancy at age 65	15	3	10	20
Life expectancy at age 75	10	2	5	15
Life expectancy at age 85	5	1	2	8
Life expectancy at age 95	2	0.5	1	3
Life expectancy at age 100	1	0.2	0	1
Life expectancy at age 105	0.5	0.1	0	0.5
Life expectancy at age 110	0.2	0.05	0	0.2
Life expectancy at age 115	0.1	0.02	0	0.1
Life expectancy at age 120	0.05	0.01	0	0.05
Life expectancy at age 125	0.02	0.005	0	0.02
Life expectancy at age 130	0.01	0.001	0	0.01
Life expectancy at age 135	0.005	0.0005	0	0.005
Life expectancy at age 140	0.002	0.0002	0	0.002
Life expectancy at age 145	0.001	0.0001	0	0.001
Life expectancy at age 150	0.0005	0.00005	0	0.0005
Life expectancy at age 155	0.0002	0.00002	0	0.0002
Life expectancy at age 160	0.0001	0.00001	0	0.0001
Life expectancy at age 165	0.00005	0.000005	0	0.00005
Life expectancy at age 170	0.00002	0.000002	0	0.00002
Life expectancy at age 175	0.00001	0.000001	0	0.00001
Life expectancy at age 180	0.000005	0.0000005	0	0.000005
Life expectancy at age 185	0.000002	0.0000002	0	0.000002
Life expectancy at age 190	0.000001	0.0000001	0	0.000001
Life expectancy at age 195	0.0000005	0.00000005	0	0.0000005
Life expectancy at age 200	0.0000002	0.00000002	0	0.0000002
Life expectancy at age 205	0.0000001	0.00000001	0	0.0000001
Life expectancy at age 210	0.00000005	0.000000005	0	0.00000005
Life expectancy at age 215	0.00000002	0.000000002	0	0.00000002
Life expectancy at age 220	0.00000001	0.000000001	0	0.00000001
Life expectancy at age 225	0.000000005	0.0000000005	0	0.000000005
Life expectancy at age 230	0.000000002	0.0000000002	0	0.000000002
Life expectancy at age 235	0.000000001	0.0000000001	0	0.000000001
Life expectancy at age 240	0.0000000005	0.00000000005	0	0.0000000005
Life expectancy at age 245	0.0000000002	0.00000000002	0	0.0000000002
Life expectancy at age 250	0.0000000001	0.00000000001	0	0.0000000001
Life expectancy at age 255	0.00000000005	0.000000000005	0	0.00000000005
Life expectancy at age 260	0.00000000002	0.000000000002	0	0.00000000002
Life expectancy at age 265	0.00000000001	0.000000000001	0	0.00000000001
Life expectancy at age 270	0.000000000005	0.0000000000005	0	0.000000000005
Life expectancy at age 275	0.000000000002	0.0000000000002	0	0.000000000002
Life expectancy at age 280	0.000000000001	0.0000000000001	0	0.000000000001
Life expectancy at age 285	0.0000000000005	0.00000000000005	0	0.0000000000005
Life expectancy at age 290	0.0000000000002	0.00000000000002	0	0.0000000000002
Life expectancy at age 295	0.0000000000001	0.00000000000001	0	0.0000000000001
Life expectancy at age 300	0.00000000000005	0.000000000000005	0	0.00000000000005
Life expectancy at age 305	0.00000000000002	0.000000000000002	0	0.00000000000002
Life expectancy at age 310	0.00000000000001	0.000000000000001	0	0.0000000000



- 1 11. An article comprising:  
2 a storage medium having a plurality of instructions, which when executed by a  
3 processor, cause transmission of packets by:  
4 storing in a host memory protocol headers and application data into packet  
5 buffers;  
6 storing in a cache on the network adapter a MAC header; and  
7 transmitting the stored packet buffers and stored MAC header across a  
8 network.
- 1 12. The article as recited in claim 11 further comprising instructions to store in the host  
2 memory a tag indicating a location of the MAC header in the cache; retrieve the tag; and  
3 access the stored MAC header at the location indicated by the tag when transmitting the  
4 MAC header across a network.
- 1 13. The article as recited in claim 11 further comprising instructions to:  
2 store the protocol headers and application data in a host memory on a personal  
3 computer; and  
4 pass the host memory protocol headers and application data to the network adapter  
5 using direct memory access controller that retrieves data and headers from the host  
6 memory and writes the retrieved data in the network adapter.
- 1 14. The article as recited in claim 13 further comprising instructions to:  
2 determine if the MAC header is different from to the MAC header previously  
3 transmitted; and  
4 store the MAC header in the host memory if the MAC header is different from the  
5 MAC header previously transmitted.
- 1 15. The article as recited in claim 14 further comprising instructions to pass the MAC header  
2 in host memory using the direct memory access controller and to write the retrieved MAC  
3 header in the network adapter.
- 1 16. The article as recited in claim 11 further comprising instructions to receive the protocol  
2 headers, application data and MAC header from an operating system.
- 1 17. The article as recited in claim 13 further comprising instructions to:

store the MAC header into cache on the network adapter using a processor writing the  
MAC header over a personal computer bus into cache located on the network adapter  
card; and  
pass the protocol headers and application data using a direct memory access controller  
located on the personal computer bus.

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18. A computer system for transmitting packet headers across a network comprising:

processor means having a host memory to store protocol headers and application data into packet buffers;

adapter means having a local cache for storing a MAC header;

DMA controller means for passing data from the host memory to said network adapter; and

said network adapter having means for transmitting both the stored packet buffers passed by the DMA controller and the MAC header stored in the local cache across a network.

19. The computer system as recited in claim 18 further comprising:

said processor having means for storing in the host memory a tag indicating a location of the MAC header in the cache and for retrieving the tag from host memory and for passing the tag to the network adapter; and

said adapter means being responsive to the tag being passed by the processor means and having means to access the stored MAC header at the location indicated by the tag when transmitting the MAC header across a network.

20. The computer system as recited in claim 19 further comprising:

a PC means having a host memory for storing the protocol headers and application data; and

a DMA means for passing the host memory protocol headers and application data to the network adapter from the host memory and for writing the retrieved data in the network adapter.

